

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Attorney 13943US01

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In the Application of: Mpr )  
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U.S. Serial No.: 10/600,162) )  
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Filed: 6/20/2003 )  
 )  
Examiner: Diep )  
 )  
Group Art Unit: 2621 )  
 )  
Confirmation No.: 9706 )

**REPLY BRIEF**

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria VA 22313-1450

Sir:

This is an appeal from the Office Action made Final mailed August 20, 2008 in which claims 17-22 were rejected. A Notice of Appeal was filed with the United States Patent and Trademark Office on November 20, 2008, concurrently with a pre-appeal brief. On February 3, 2010, Appellant filed an Appeal Brief and Examiner filed an Answer on May 26, 2010.

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**I. REAL PARTY IN INTEREST**

Broadcom Corporation, a corporation organized under the laws of the state of California and having a place of business at 16215 Alton Parkway, Irvine California 92618-3616, has acquired the entire right, title, and interest in and to the invention, the application, and any and all patents to be obtained therefore, as set forth in the Assignment filed with the present application and recorded on November 25, 2003 at Reel 014152, Frame 0575.

**II. RELATED APPEALS AND INTERFERENCES**

There are no related appeals or interferences.

**III. STATUS OF THE CLAIMS**

Claims 1-16 are cancelled without prejudice.

Claims 17-22 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication 2006/0026637 to Gatto ("Gatto").

Appellant identifies claims 17-22 for appeal.

**IV. STATUS OF AMENDMENTS**

There are no amendments pending in the present application.

## **V. SUMMARY OF CLAIMED SUBJECT MATTER**

Independent claim 17 is directed to a system for providing a plurality of videos for simultaneous display, said system comprising:

a video decoder (Figure 1, decoder 120) for decompressing a plurality of compressed video streams (Figure 1, Video Sequences 110, 0027: "The video sequences 110 are received at a decoder 120. The decoder 120 decodes the compressed frames 115, recovering frames 105'"), thereby resulting in a plurality of decompressed video streams, wherein each of said decompressed video streams comprises a plurality of pictures (0027: "The decoder 120 decodes the compressed frames 115, recovering frames 105'"); and

a register (Figure 4, registers 405) for indicating a past prediction picture, and a future prediction picture for each of the plurality of compressed video streams [0043].

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

Whether claims 17-23 are anticipated by Gatto.

## **VII. ARGUMENT: CLAIMS 17**

Claim 17 stands rejected under 35 U.S.C. 102(e) as being anticipated by Gatto.

Claim 17 is reproduced as follows:

A system for providing a plurality of videos for simultaneous display, said system comprising:

a video decoder for decompressing a plurality of compressed video streams, thereby resulting in a plurality of decompressed video streams, wherein each of said decompressed video streams comprises a plurality of pictures; and

a register for indicating a past prediction picture, and a future prediction picture for each of the plurality of compressed video streams.

To anticipate a claim, the reference must teach every element of the claim. MPEP 2131. "A claim is anticipated only if each and every element as set forth in the claimed is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

Appellants respectfully submit that the rejection to claim 17 should be reversed because Gatto does not teach all of the claimed limitations.

**A. THE FINDING THAT GATTO TEACHES "A VIDEO DECODER FOR DECOMPRESSING A PLURALITY OF COMPRESSED VIDEO STREAMS" IN THE SINGULAR CONTEXT IS IN ERROR**

Examiner's Answer makes two arguments in response:

(1) "there is absolutely no indication that a separate decoder must be used to decode a different MPEG encoded video stream, or in other words, there must be a one-on-one relationship between MPEG decoder and MPEG decoded video stream, one can not preclude the fact that a decoder can be used to decoded more than one MPEG encoded video streams";

(2) the watchdog processor meets the foregoing claimed limitation.

**1. Examiner's first argument fails because Appellant is not required to establish that the reference explicitly does not teach Appellant's invention.**

Examiner's arguments are erroneous on their face. Appellant reiterates that "To anticipate a claim, the reference must teach every element of the claim. MPEP 2131. "A claim is anticipated only if each and every element as set forth in the claimed is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

Therefore, the fact that "there is absolutely no indication that a separate decoder must be used to decode a different encoded video stream" does not establish anticipation. Rather, the burden is on Examiner to establish that Gatto does not require "a separate decoder must be used to decode a different encoded video stream".

Examiner has indicated that "It is clear that Gatto et al needs one or more decoders to decode a plurality of output streams, and there is absolutely no indication that a separate decoder must be used". However, there is also absolutely no disclosure or indication that a single encoder is used.

Moreover, Gatto does show than one decoder. In Figure 1, there is both HDTV/PAL/NTSC Decoder 130 and MPEG Decoder 154. Therefore, under the foregoing facts, a rejection under 35 U.S.C. 102(e) must be REVERSED.

**2. WATCHDOG PROCESSOR.**

Gatto 0039 teaches allowance of various memory devices, including 100 Gbytes of storage space, enabling

between about 100 and 300 hours of video recording. Assignee respectfully submits that the foregoing is only indicative of the amount of content that can be stored in Gatto, but is not indicative of the number of video decoders. There is no indication that the amount of memory required to store given numbers of video streams is dependent on the number of decoders that decompress them.

Regarding the "watchdog processor", Gatto 0041 makes no such statement that it "monitor[s] to] ensure that enough of teach stream was throughput through the singular processor". To state that it "would" is simply speculation and conjecture. Appellant reiterates that "A claim is anticipated only if each and every element as set forth in the claimed is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

**B. THE FINDING THAT GATTO TEACHES "A REGISTER FOR INDICATING A PAST PREDICTION PICTURE, AND A FUTURE PREDICTION PICTURE FOR EACH OF THE PLURALITY OF COMPRESSED VIDEO STREAMS" IS IN ERROR**

Examiner continues to rely on "events database". Moreover, Gatto 0040 does not does not even describe a "prediction index". Moreover, 0142 describes events such as "display of a channel, recording of a channel", but not does not state anything about indicating the past prediction picture or future prediction picture.

## VIII. ARGUMENT: CLAIM 18

Claims 18 stands rejected under 35 U.S.C. 102(e) as anticipated by Gatto. Claim 18 recites:

The system of claim 17, wherein the video decoder motion compensates motion estimated pictures in each of the plurality of compressed video streams using at least the past prediction pictures indicated by said register for each of the plurality of compressed video streams.

### A. GATTO DOES NOT TEACH THE CLAIMED "MOTION COMPENSATES MOTION ESTIMATED PICTURES IN EACH OF THE PLURALITY OF COMPRESSED VIDEO STREAMS USING AT LEAST THE PAST PREDICTION PICTURES INDICATED BY SAID REGISTER FOR EACH OF THE PLURALITY OF COMPRESSED VIDEO STREAMS"

Examiner originally indicated that the foregoing is "inherently included in the MPEG standards". Appellant argued that "motion compensates ... using at least the past prediction pictures indicated by said register for each of the plurality of compressed video streams", was not required by the MPEG standards, and requested an appropriate MPEG standard citation.

Examiner now argues that "a register" is interpreted as "a mechanical device by which certain data are automatically recorded" and "therefore, a memory to store past reference frame and/or future reference frame for predictive decoding as was well known in MPEG would meet the limitation as claimed.". However, as an initial matter, "well known" is not sufficient to establish anticipation by inherency.

Additionally, what was not known in MPEG is "a register" "for each of the plurality of compressed video streams".

Accordingly, Assignee respectfully requests that the rejection to claim 18 be **REVERSED**.

**B. EXAMINER'S REASONING THAT GATTO INHERENTLY TEACHES "REGISTER FOR EACH OF THE PLURALITY OF COMPRESSED VIDEO STREAMS" AND ENABLES A SINGLE DECODER TO DECODE PLURAL MPEG STREAMS IS CIRCULAR.**

Appellant respectfully submits that even if Gatto explicitly teaches "a video decoder for decompressing a plurality of compressed video streams" (which it does not!), Gatto is non-enabling. Gatto would be non-enabling decoding an MPEG stream requires it fails to teach a way that the single decoder could keep track of the past prediction picture and future prediction picture for each stream. At the same time, Examiner's position appears to in order to decode multiple streams, a register for storing the past and future prediction pictures are inherent for each of the streams is inherent.

To find on the one hand that Gatto enables decompressing multiple compressed streams on one hand, and register for storing the past and future prediction pictures in inherent for decoding multiplex compressed streams is circular reasoning. The inherency of the register relies on enablement of decompression of multiple streams, and enablement of decompression of multiple streams relies on the inherency of the register.

## **IX. ARGUMENT - CLAIMS 19, 21, AND 22**

Claims 19, 21, and 22 recite, respectively:

19. The system of claim 17, wherein said register indicates a picture for display for each of the plurality of compressed video streams, and further comprising:

a display engine for providing an output, said output concatenating the pictures for display for each of the plurality of compressed video streams indicated by the register.

21. The system of claim 19, wherein the display engine examines the register, selects the pictures indicated by the register for display, and concatenates the pictures indicated for display by the register.

22. The system of claim 21, wherein the display engine requests the pictures indicated by the register for display, from a frame buffer.

Examiner continues to rely on the "events database" in Gatto, and speculate actions that are not taught by Gatto. Appellant reiterates that Examiner is engaging in circular reasoning to establish that Gatto teaches the foregoing limitations.

Accordingly, Assignee respectfully requests that the rejections to claims 19, 21, and 22 be REVERSED.

**X. CONCLUSION**

For the foregoing reasons, claims 17-22 are distinguishable over the prior art of record. Reversal of the Examiner's rejection and issuance of a patent on the application are therefore requested.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Account No. 13-0017.

Dated: July 26, 2010 Respectfully submitted,

/Mirut P. Dalal/

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CLAIMS APPENDIX

1-16. (Cancelled)

17. A system for providing a plurality of videos for simultaneous display, said system comprising:

a video decoder for decompressing a plurality of compressed video streams, thereby resulting in a plurality of decompressed video streams, wherein each of said decompressed video streams comprises a plurality of pictures; and

a register for indicating a past prediction picture, and a future prediction picture for each of the plurality of compressed video streams.

18. The system of claim 17, wherein the video decoder motion compensates motion estimated pictures in each of the plurality of compressed video streams using at least the past prediction pictures indicated by said register for each of the plurality of compressed video streams.

19. The system of claim 17, wherein said register indicates a picture for display for each of the plurality of compressed video streams, and further comprising:

a display engine for providing an output, said output concatenating the pictures for display for each of the plurality of compressed video streams indicated by the register.

20. The system of claim 17, wherein a single video decoder decompresses the plurality of compressed video streams, thereby resulting in the plurality of decompressed video streams, wherein each of said decompressed video streams comprises the plurality of pictures.

21. The system of claim 19, wherein the display engine examines the register, selects the pictures indicated by the register for display, and concatenates the pictures indicated for display by the register.

22. The system of claim 21, wherein the display engine requests the pictures indicated by the register for display, from a frame buffer.

## EVIDENCE APPENDIX

RELATED PROCEEDINGS APPENDIX

There are no pages in this Appendix.